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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/714,072

Applicant(s)

RIESCHL ET AL.

Examiner

Ngoc K. Vu

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Response to Arguments***

1. Applicant's arguments filed 9/14/04 with respect to claims 1-25 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 11-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Dan et al. (US 5,544,327 A).

Regarding claim 11, Dan discloses a video on demand system (see figure 1) comprising:

storing means for temporarily storing a video program (buffer pool 40 temporarily stores video data - see figure 1; col. 3, lines 55-59);

receiving means for receiving a user request for said video program and spooling said video program into said storing means (clients 10 sends requests to a server 30 via a communication network 20. Buffer pool 40 has blocks containing data ready for transmission to the users. The disk I/O process 50 reads video data from the disks 55 into empty buffers obtained from the free pool 70 and inserts the buffers into the buffer pool 40 – see col. 3, lines 25-28 and 53-61);

plurality of means for streaming means responsively coupled to said storing means for streaming said video program (a plurality of video streams stored in a number of disks 55 coupled to the buffer pool 40 – see col. 42-45 and figure 1); and

directing means responsively coupled to said receiving means and said plurality of streaming means for directing one of said plurality of streaming means to stream said video program to said user in response to said request (the communication process 60 transmits video data from the buffer pool 40 to the clients 10 - see figure 1 and col. 3, lines 25-27 and 53-61).

Regarding claim 12, Dan discloses selecting one of the disks 55 based upon that particular disk having the requested video data (see col. 3, lines 46-50 and 56-60; col. 4, lines 46-50).

Regarding claim 13, Dan discloses Dan discloses that the buffer manager allocates buffers to streams so as to reduce the load imbalance across the disks or maximize the number of streams being served from buffer depending of the current load on the system. Dan further discloses that the potential load from the disk table represents the number of streams that can be switched to this disk in order to free buffer for reducing the load on another disk. It is used by the buffer manager 80 when allocating buffer to the disk (see col. 3, lines 61-65 and col. 4, lines 50-53).

Regarding claim 14, Dan discloses that disk I/O process 50 reads video data from one of the disks 55 and stored the video data in buffer pool 40. It is noted that buffer pool 40 temporarily stores the video data for transmission to the users. If enough free buffer is not available, the buffer manger attempts to free some space by displacing some other stream. It must be understood that the system replaces a previous video data from one of the disks 55 with the requested video data in the buffer pool 40 (see col. 3, lines 55-61 and col. 5, lines 57-59).

Regarding claim 15, Dan discloses that the buffer manager allocates buffers to streams so as to reduce the load imbalance across the disks or maximize the number of streams being

Art Unit: 2611

served from buffer depending of the current load on the system. The buffer manager examines the available space to determine if enough free buffer space exists to accommodate the candidate request (see col. 3, lines 59-65 and col. 5, lines 47-50).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-10 and 16-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dan et al. (US 5,544,327 A) in view of Suzuki et al. (US 5,675,738 A).

Regarding claim 1, Dan discloses in a video on demand system for supplying video data in response to a user request (see col. 1, lines 16-19), the improvement comprising:

a plurality of disks 55 supplying video data to said user (see col. 3, lines 42-45 and figure 1);

a memory 40 for storage of said video data responsively coupled to each of said plurality of video servers (see figure 1; col. 3, lines 53-59); and

a server 30 responsively coupled to said memory which receives said request from said user (clients 10 sends requests to a server 30 via a communication network 20 – see col. 3, lines 25-28), spools said video data into said memory, and selects a particular one of said plurality of disks to stream said video data from said memory to said user in response to said user request (e.g., buffer pool 40 has blocks containing data ready for transmission to the users. The disk I/O process 50 reads video data from the disks 55 into empty buffers obtained from the free pool 70 and inserts the buffers into the buffer pool 40. The communication process 60

Art Unit: 2611

transmits video data from the buffer pool 40 to the clients 10 - see figure 1 and col. 3, lines 25-27 and 53-61).

Dan does not disclose a plurality of video servers for supplying video data. However, Suzuki shows in figure 1 a plurality of video information server 14 for supplying a plurality of types of video information (see col. 4, lines 18-21 and 30-32; figure 1). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Dan by including a plurality of video information server 14 for supplying video information as taught by Suzuki in order to provide different types of video information to the users.

Regarding claim 6, Dan discloses an apparatus (see figure 1) comprising:

a video program requested generated by a user (e.g., clients 10 sends requests to a server 30 via a communication network 20 – see col. 3, lines 25-28);

a plurality of disks 55 supplying video data to said user (see col. 3, lines 42-45 and figure 1);

a memory 40 for storing of said video data responsively coupled to each of said plurality of disks (see figure 1; col. 3, lines 53-59); and

a multimedia application server 30 responsively coupled to said memory which memory which receives said video program request from said user (e.g., clients 10 sends requests to a server 30 via a communication network 20 – see col. 3, lines 25-28), spools said video program into said memory, and selects one of the said plurality of disks to stream said video program to said user from said memory (e.g., buffer pool 40 has blocks containing data ready for transmission to the users. The disk I/O process 50 reads video data from the disks 55 into empty buffers obtained from the free pool 70 and inserts the buffers into the buffer pool 40. The

communication process 60 transmits video data from the buffer pool 40 to the clients 10 - see figure 1 and col. 3, lines 25-27 and 53-61).

Dan does not disclose a plurality of video servers for supplying video data. However, Suzuki shows in figure 1 a plurality of video information server 14 for supplying a plurality of types of video information (see col. 4, lines 18-21 and 30-32; figure 1). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Dan by including a plurality of video information server 14 for supplying video information as taught by Suzuki in order to provide different types of video information to the users.

Regarding claim 16, Dan discloses a method of selecting and streaming a video program to a user comprising:

receiving a message from said user requesting said video program at a multimedia application server 30 (e.g., clients 10 sends requests to a server 30 via a communication network 20 – see col. 3, lines 25-28);

spooling said video program into a memory 40 by said multimedia application server (the disk I/O process 50 reads video data from the disks 55 into empty buffers obtained from a free pool 70 and inserts the buffers into a buffer pool 40 – see col. 3, lines 53-59);

selecting one of a plurality of disks 55 to stream said video program to said user from said memory (e.g., buffer pool 40 has blocks containing data ready for transmission to the users. The process 50 reads video data from a plurality of disks 55 into empty buffers obtained from the free pool 70 and inserts the buffers into the buffer pool 40. The communication process 60 transmits video data from the buffer pool 40 to the clients 10 - see figure 1 and col. 3, lines 25-61).

Dan does not disclose a plurality of video servers for supplying video data. However, Suzuki shows in figure 1 a plurality of video information server 14 for supplying a plurality of types of video information (see col. 4, lines 18-21 and 30-32; figure 1). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Dan by including a plurality of video information server 14 for supplying video information as taught by Suzuki in order to provide different types of video information to the users.

Regarding claim 21, Dan discloses an apparatus for providing video on demand programming to a plurality of users (see col. 1, lines 16-19) comprising:

- a video program requested generated by a user (e.g., clients 10 sends requests to a server 30 via a communication network 20 – see col. 3, lines 25-28);

- a plurality of disks 55 supplying video data to said user (see col. 3, lines 42-45 and figure 1);

- a memory 40 for storing of said video data responsively coupled to each of said plurality of video servers (see figure 1; col. 3, lines 53-59); and

- a multimedia application server 30 responsively coupled to said memory which memory which receives said video program request from said user (e.g., clients 10 sends requests to a server 30 via a communication network 20 – see col. 3, lines 25-28), spools said video program into said memory, and selects one of the said plurality of disks to stream said video program to said user from said memory (e.g., buffer pool 40 has blocks containing data ready for transmission to the users. The disk I/O process 50 reads video data from the disks 55 into empty buffers obtained from the free pool 70 and inserts the buffers into the buffer pool 40. The communication process 60 transmits video data from the buffer pool 40 to the clients 10 - see figure 1 and col. 3, lines 25-27 and 53-61).

Dan does not disclose a plurality of video servers for supplying video data. However, Suzuki shows in figure 1 a plurality of video information server 14 for supplying a plurality of types of video information (see col. 4, lines 18-21 and 30-32; figure 1). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Dan by including a plurality of video information server 14 for supplying video information as taught by Suzuki in order to provide different types of video information to the users.

Regarding claims **2, 7, 17 and 22**, the combination of Dan and Suzuki discloses selecting one of the video information servers based upon that particular server having the requested video data (see Dan: col. 3, lines 46-50 and 56-60; col. 4, lines 46-50; Suzuki: col. 4, lines 47-53).

Regarding claims **3, 8 and 23**, the combination teaching of Dan and Suzuki discloses the recited limitations. Particularly, Dan discloses that the buffer manager makes a list of disks whose actual load is above a predetermined load imbalance threshold (see col. 6, lines 58-60). Suzuki discloses that one of the servers 14 is selected for a specific request (see col. 4, lines 47-53).

Regarding claims **4, 9, 18 and 24**, the combination teaching of Dan and Suzuki discloses the recited limitations. Particularly, Dan discloses that the buffer manager allocates buffers to streams so as to reduce the load imbalance across the disks or maximize the number of streams being served from buffer depending of the current load on the system. Dan further discloses that the potential load from the disk table represents the number of streams that can be switched to this disk in order to free buffer for reducing the load on another disk. It is used by the buffer manager 80 when allocating buffer to the disk (see col. 3,

lines 61-65 and col. 4, lines 50-53). Suzuki discloses that one of the servers 14 is selected for a specific request (see col. 4, lines 47-53).

Regarding claims **5, 10, 19 and 25**, the combination teaching of Dan and Suzuki discloses the recited limitations. Particularly, Dan discloses that disk I/O process 50 reads video data from one of the disks 55 and stored the video data in buffer pool 40. It is noted that buffer pool 40 temporarily stores the video data for transmission to the users. If enough free buffer is not available, the buffer manger attempts to free some space by displacing some other stream. It must be understood that the system replaces a previous video data from one of the disks 55 with the requested video data in the buffer pool 40 (see col. 3, lines 55-61 and col. 5, lines 57-59). Suzuki discloses that one of the servers 14 is selected for a specific request (see col. 4, lines 47-53).

Regarding **claim 20**, Dan discloses that the video data that has been read into the buffer for a client can be retained for re-transmission to other clients. This conserves server resources since the re-transmitted block does not have to be re-read from disk 55 (see col. 4, lines 1-4).

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

Art Unit: 2611

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoc K. Vu whose telephone number is 703-306-5976. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Grant can be reached on 703-305-4755. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NV  
February 3, 2005



CHRIS GRANT  
PRIMARY EXAMINER